Comparison of lactulose, metronidazole and hepatic specific diet in controlling clinical signs in dogs with congenital extrahepatic portosystemic shunts: A randomized clinical trial

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Current medical management of dogs with congenital extrahepatic portosystemic shunt (cEHPSS) comprises the use of hepatic specific diet (HSD), lactulose and/or antibiotic therapy, aiming to control clinical signs of hepatic encephalopathy (HE). Meta-analysis of people suffering from type C HE disclosed that antibiotic and disaccharide therapy are equally effective in controlling HE symptoms.

A triple-arm randomized clinical trial was designed to compare the efficacy of different treatment combinations [HSD and lactulose (HSD + LACT), HSD and metronidazole (HSD + METRO), and solely HSD] in controlling the clinical signs in dogs suffering from cEHPSS. Dogs were not allowed to be receiving medical therapy at the time of inclusion. The allocated 'initial' treatment was continued for 4 weeks. Subsequently, all dogs received the combined treatment with HSD, LACT and METRO for an additional 2 weeks. Standardized questionnaires (assessing neurologic, gastrointestinal and urinary signs) were completed by the owners and a clinical score was calculated at diagnosis and at 4 and 6 weeks.

Thirty-six dogs were included, 12 were allocated to each group. Two dogs, 1 from HSD + LACT group and 1 from HSD + METRO groups were subsequently excluded due to concomitant diseases. Thirty-three dogs had their clinical scores available at the 4-weeks recheck and 27 dogs completed the trial until week 6 (10 HSD + LACT, 9 HSD + METRO, and 8 HSD). At diagnosis, the clinical scores were similar in all treatment groups ($P = 0.89$). Dogs in the "HSD + METRO" as well as the "HSD + LACT" group had a significant reduction in their clinical scores after the initial treatment compared to at diagnosis ($P = 0.03$ and $P = 0.002$, respectively). In contrast, no clinical improvement was observed in the HSD group ($P = 0.401$). At 6 weeks, a trend to improvement was noticed in the HSD group ($P = 0.06$), but no further improvement of the clinical score was detected in both other groups ($P = 1$).

Combination of HSD + LACT or HSD + METRO effectively reduces the clinical scores in cEHPSS dogs, while sole HSD therapy is not sufficient to control the same clinical signs.

Disclosures

No disclosures to report.